

Liposuction: New and Improved?

BY ANDREW KLEINMAN, M.D.,

WITH ADDITIONAL REPORTING BY SHARON KENNEDY

Liposuction, which has been performed in this country for more than 25 years, is one of plastic surgery's most popular procedures—and for excellent reason. Traditional liposuction is among the safest surgical procedures that exist. It has a very low risk of complications if it is performed on a patient who is close to his or her ideal weight and it has yielded excellent aesthetic results for many.

Although there have been some modifications during the years, the procedure hasn't seen much change from the original technique—until now. Recently, there have been a slew of new developments that claim to improve the standard version of liposuction. But are these new techniques better than the original? Are they safer or cosmetically superior?

To find out, we talked to plastic surgeon **Dr. Andrew Kleinman**, who has appeared in the past seven editions of Castle Connolly's guide, *Top Doctors: New York Metro Area*, and in all editions of *The WAG's* annual "Most Distinguished MDs" issue. We also asked practitioners of these new techniques to give us their perspective.

Please keep in mind as you read the following assessments that any technique is only as good as the surgeon wielding it and that different procedures might be better suited to different candidates.

The New Technique: Vaser

What it is: Ultrasonic-assisted liposuction

Kleinman says: Ultrasonic liposuction has been performed for more than a decade, and uses ultrasound waves to "liquefy fat" prior to the fat being removed by suction. For most areas of the body, the results are similar to the results of traditional liposuction, but in certain areas where the fat is especially fibrous, for example the upper back, ultrasonic liposuction can sometimes give an improved result. Unfortunately, ultrasonic liposuction has had a higher rate of complications than traditional liposuction, including an increased rate of numbness and potential scarring of the skin, and for the past several years, the number of procedures being done using this technique has decreased.



There is a technique called "Vaser" that is being advertised as a newer, safer form of ultrasound technology, with advertised benefits including low to minimal pain and bruising. Since traditional liposuction using the current technique already results in a fairly low incidence of pain and bruising, it is not clear that Vaser is a substantial improvement. Since the technology is expensive, it does result in an increased cost of the procedure.

The counterview: **Douglas M. Senderoff, M.D., F.A.C.S.**, who uses the Vaser liposuction technique at PARK AVENUE AESTHETIC SURGERY in Rye Brook and Manhattan, is quick to point to other benefits of Vaser. "I wouldn't say that the major benefit is less bruising," says Senderoff. "People heal anyway, and pain is subjective. For me, the benefits of Vaser are that the results are better—more fat can be removed from the area because there is less blood loss and trauma than going in with the traditional wand. It is particularly effective in re-dos and touchups. If there is scarring in an area, Vaser can selectively melt the fat around the scar tissue, thus preventing further tissue damage." Like ultrasonic liposuction, Vaser is also very effective in treating fibrous areas like the back and chest. As for the cost, Senderoff estimates the price is \$350 more than traditional liposuction,

due to the added fee per use of the Vaser device.

The New Technique: Smart Lipo

What it is: Laser-assisted liposuction

Kleinman says: Another technology that has been advertised heavily is laser liposuction, also called "Smart Lipo." The theory of the benefit of laser liposuction is that the laser can potentially cause the skin to shrink after the fat is removed. In addition, the laser is said to liquefy the fat. I recently went to a course on laser liposuction, and the teaching was that the laser heated up the skin to cause it to shrink. The plastic surgeon giving the course used a temperature probe to very carefully monitor the skin temperature. If the temperature became too hot, it could cause burning and scarring of the skin. If the temperature was not hot enough, it appeared to have little to no benefit on the skin. In any case, the amount of shrinkage of the skin appeared to be minimal. In addition, the risk of complications with a laser is most likely higher than it is with using traditional liposuction because if you're using a laser you have the additional potential risk. Again the manufacturer claims that the bruising and scarring are decreased. This technique has recently appeared frequently on television and in magazines due to a very heavy marketing campaign. Unfortunately, as of yet, there are no accepted double-blind studies demonstrating that Smart Lipo has any significant advantage over traditional liposuction.

The counterview: For **Drs. Joshua Greenwald, Samuel Beran and Chris Guzman** of COSMETIC SURGERY ASSOCIATES of Westchester, in White Plains, using Smart Lipo is common sense. "The patient achieves permanent fat removal with visible skin tightening, and a local anesthesia can be used because of the small size of the instruments," says Greenwald. "Patients can be wide awake during the procedure and can walk right out of here afterwards. We've seen much more skin-tightening with Smart Lipo than traditional liposuction," he continues. "With traditional lipo, the fat is emptied out and you bet that the skin will retract. You are very dependent on the quality of the skin prior to the procedure. With Smart Lipo, you are making the skin retract through the heat of the laser. In fact, many clients who choose traditional liposuction because they are having a high-volume of fat removed and wish to be put under general anesthesia, also have Smart Lipo done to get the skin-tightening results." His colleague, Beran adds, "It's an excellent adjunct to traditional liposuction but 50 percent of my patients are only interested in Smart Lipo."

And what about the concern of lasers burning the skin? Guzman says he is sure to keep an eye on skin temperature ("Because that's how I'm treating the skin"), and has never seen a burn or scarring. "As with any procedure, in the proper hands, risk is minimal." Another benefit? While surgical costs are similar, there are no anesthesiologist fees or operating room fees, resulting in substantial cost savings for patients seeking body contouring procedures.

The New Technique: Lipodissolve

What it is: Injections of fat-dissolving substances

Kleinman says: Lipodissolve is another technique that is being advertised extensively. It is a controversial cosmetic procedure in which various non-FDA approved drug mixtures are used usually with phosphatidylcholine, a chemical

that has not been approved for any fat-dissolving injectable use in the U.S. Three medical associations have issued health warnings cautioning against the use of injection lipolysis, including the American Society of Plastic Surgeons, the American Society of Aesthetic Plastic Surgery, and the American Society of Dermatologic Surgery. Similar warnings have been issued in England and Canada. ANVISA, the governmental body regulating the manufacturer and commercialization of drugs in Brazil, banned the manufacturer, use, and sale of injection lipolysis agents using phosphatidylcholine. In September, the FDA issued the following statement:

"We are aware of the practice of using Lipodissolve and are investigating and evaluating. It is not FDA approved. In fact, there are no FDA-approved drugs with an approved indication to dissolve fat and FDA cannot assure the safety and efficacy of these types of drugs. Consumers need to know that this is a buyer-beware situation. These are unapproved drugs for unapproved uses and we can't guarantee consumers' safety."

In spite of these warnings, Lipodissolve is currently being performed by many physicians in the United States. There currently are clinical trials being performed in a number of locations in the United States under research protocols to see if this technique is effective and safe. Most physicians recommend waiting until the results of these trials are reported before having this procedure. There are many reports of complications, including scarring and skin irregularities.

The counterview: **Dr. Jyotindra Shah**, who currently offers the Lipodissolve technique at AMARI MEDICAL SPA in Scarsdale, points to a study performed by **Dr. Adam Rotunda** at UCLA, which has demonstrated Lipodissolve to be effective in dissolving the fat under the lower eyelid, as proof of the technique's effectiveness and safety: "Phosphatidylcholine-Deoxycholate (PCDC), the main ingredient used in Lipodissolve, has been used in the world for a number of years and is present in each and every cell of our body making up the cell wall. It has been used to help premature babies breathe by dissolving fat in the trachea. It is FDA-approved, but it is used in an off-label way—for example, the clinical use for aspirin is for pain relief, but an off-label use for aspirin is to prevent blood clots." Among Lipodissolve's benefits, Shah lists no down time ("You can return to work the same day"), no major side effects except pain and redness in the area, and none of the drainage associated with liposuction (or the anesthesia or surgery for that matter). With Lipodissolve, all medicines are injected into the fat, not the skin, so Shah has seen no scarring.

Kleinman's final word: Although some of the newer techniques may represent advances in liposuction for specific situations, none of them has yet been proven to be a major improvement over more traditional techniques. As with all procedures, the training, skill and experience of the surgeon is still the most important factor. When evaluating the surgeon, ask whether he or she is board-certified and by which board. Also ask if that board is recognized by the American Board of Medical Specialties. When exploring a new procedure, ask the physician how long he's been doing this procedure and how many he has done. And when evaluating any new medical device. Remember the old saying "When you have a hammer, the entire world looks like a nail."

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Dr. Andrew Kleinman's new office address is 800 Westchester Ave., Rye Brook. Telephone: 253-0700 and website www.cosmeticsurgerywestchester.com

Coming Soon to a Doctor's Office Near You!

A very interesting new technique that is not yet approved by the FDA is **Ultrashape**. This technique uses external ultrasound without the need for an incision. Using a transducer on the skin, focused ultrasound energy is delivered to the subcutaneous fat. This causes a disruption of fat cells while theoretically leaving the surrounding tissues unharmed. The fat from these cells is then handled by the body the same way that fat derived from a meal is handled by the body.

An important feature of the Ultrashape procedure is a computerized tracking and guidance system. This causes the fat disruption to be done in a uniform fashion so there are not irregularities following the procedure. This procedure is now approved in 48 countries and has been performed on thousands of patients. The results appear to be somewhat encouraging, but the amount of improvement is less than with traditional liposuction. This procedure can be done two or three times on the same area, thereby improving the overall results. This appears to be potentially a good solution for people with modest areas of excess fat who do not wish to have the recovery of surgery. It is most likely that larger deposits of fat will continue to require removal with surgical forms of liposuction.

—Dr. Andrew Kleinman